

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) A vascular closure assembly, comprising:
an anchor;
a collagen;
a suture coupled to the anchor and extending through the collagen;
a suture locking mechanism comprising a housing and at least first and second locking posts extending cantilevered from the housing;
the suture locking mechanism being rotatable between a non-locked position and a locked position;
wherein the suture is capable of movement when the suture locking mechanism is in the non-locked position and the suture at least partially wraps around the first and second locking posts and is relatively incapable of movement when the suture locking mechanism is in the locked position.
2. (Canceled)
3. (Previously Presented) The assembly according to claim 2, wherein the suture locking mechanism comprises a suture channel sized for the suture to pass through a portion of the locking mechanism.

4-5. (Canceled)

6. (Previously Presented) The assembly according to claim 1, wherein the housing includes a wedge-shaped portion.

7. (Previously Presented) The assembly according to claim 6, wherein the wedge shaped portion includes an acute angled portion.

8. (Previously Presented) The assembly according to claim 6, wherein the wedge shaped portion includes an obtuse angled portion

9. (Previously Presented) The assembly according to claim 1, wherein the rotating movement is caused by expansion of the collagen.

10. (Previously Presented) The assembly according to claim 1, wherein the suture locking mechanism comprises at least one channel defined between the first and second locking posts.

11. (Original) The assembly according to claim 10, wherein
the at least one channel is arranged such that it provides a substantially non-tortuous
suture path when the suture locking mechanism is in the non-locked position; and
the at least one channel is arranged such that it provides a substantially tortuous suture
path when the suture locking mechanism is in the locked position.
12. (Original) The assembly according to claim 11, wherein the non-tortuous path is
substantially parallel to the suture and the tortuous path has at least a portion that is substantially
non-parallel to the suture.
13. (Original) The assembly according to claim 10, wherein the channel is
substantially straight.
14. (Original) The assembly according to claim 10, wherein the channel has at least
one bend.
15. (Original) The assembly according to claim 10, wherein the channel has a surface
comprising at least one of a textured surface, a ribbed surface, a grooved surface, and a notched
surface to increase the frictional resistance.
16. (Previously Presented) The assembly according to claim 1, wherein locking
mechanism is triangular shaped.

17. (Previously Presented) The assembly according to claim 1, wherein the locking member includes at least three exterior surfaces.

18-20. (Canceled)

21. (Previously Presented) A vascular closure device, comprising:
an anchor;
a collagen;
a locking device; and
a suture coupled to the anchor and extending through the collagen and the locking device, wherein the locking device comprises:

a housing; and
at least two cantilevered locking posts extending from the housing;
wherein the locking device being rotatable between a first orientation and a second orientation, the first orientation providing the suture with a relatively non-tortuous path defined for the suture through the locking device, and
the second orientation providing the suture with a relatively tortuous path defined at least in part between the the at least two locking posts.

22. (Previously Presented) The closure device according to claim 21, wherein the locking device comprises a channel configured for passage of the suture.

23. (Previously Presented) The closure device according to claim 21, wherein the locking device includes an obtuse angled portion.

24. (Previously Presented) The closure device according to claim 21, wherein the locking device includes at least one of a textured surface, a ribbed surface, a grooved surface, a notched surface, and a channeled surface to increase the frictional resistance.

25. (Previously Presented) The closure device according to claim 21, wherein the locking device comprises an acute angled portion.

26. (Previously Presented) The closure device according to claim 21, wherein the first orientation provides a non-tortuous path substantially parallel to the suture path and the second orientation provides a tortuous path having at least a portion that is substantially non-parallel to the suture path.

27. (Previously Presented) The closure device according to claim 22, wherein the channel is substantially straight.

28. (Previously Presented) The closure device according to claim 22, wherein the channel includes at least one curve.

29. (Previously Presented) The closure device according to claim 22, wherein the channel includes a surface comprising at least one of a textured surface, a ribbed surface, a grooved surface, and a notched surface to increase the frictional resistance.

30-32. (Canceled)

33. (Currently Amended) A vascular closure device, comprising:

an anchor;

a collagen;

a suture; and

a suture locking assembly, the suture locking assembly including a housing and at least ~~cantilevered~~ two cantilevered locking posts extending from the housing;

wherein the suture is coupled to the anchor and extends through the collagen and the suture locking assembly in a space defined at least in part between the at least two locking posts, the suture locking assembly being rotatable between unlocked and locked positions.

34. (Previously Presented) The vascular closure device according to claim 33 wherein in the unlocked position a pathway for the suture is relatively non-tortuous and in the locked position the pathway for the suture is relatively tortuous.

35. (Previously Presented) The vascular closure device according to claim 33, wherein the locking assembly comprises a channel defined between the at least two locking posts, the channel having a first orientation and a second orientation, such that in the first orientation the suture pathway is relatively non-tortuous and in the second orientation the suture pathway is relatively tortuous.

36. (Previously Presented) The vascular closure device according to claim 35, wherein the tortuous suture pathway is formed by wrapping the suture around at least a portion of each of the at least two locking posts.

37. (Canceled)

38. (Previously Presented) A vascular closure assembly, comprising:

- an anchor;
- a collagen;
- a suture coupled to the anchor and extending through the collagen;
- a locking element comprising a housing and at least first and second cantilevered locking posts extending from the housing;
- the locking element being rotatable between a first orientation and a second orientation;
- in the first orientation, the locking element provides a non-tortuous pathway for the suture that is defined at least in part between the first and second locking posts such that the suture can move relative to the housing; and
- in the second orientation, the locking element provides a tortuous pathway for the suture that is defined at least in part between the first and second locking posts such that the suture is relatively immobile relative to the housing.

39. (Previously Presented) The vascular closure assembly according to claim 38, wherein locking element has a first surface area in contact with the suture when in the first orientation and a second surface area in contact with the suture when in the second orientation.

40. (Previously Presented) The vascular closure assembly according to claim 39, wherein the first surface area is less than the second surface area.

41. (Previously Presented) The vascular closure assembly according to claim 39 wherein, the second surface area includes at last one of a textured portion, a ribbed portion, a grooved portion, a notched portion, a channeled portion, an adhesive portion, a mastic portion, and a taped portion.

42. (Previously Presented) The vascular closure assembly according to claim 38, wherein the locking element comprises a bio-resorbable material.

43. (Previously Presented) A vascular closure assembly, comprising:

- an anchor;
- a collagen;
- a suture coupled to the anchor and extending through the collagen;
- a locking element comprising a housing and at least first and second cantilevered locking posts extending from the housing;
- a channel formed in the locking element defining a suture pathway;
- the locking element being rotatable between a first orientation and a second orientation;
- in the first orientation, the channel provides a non-tortuous pathway for the suture that is defined at least in part between the first and second locking posts such that the suture can move relative to the locking element; and
- in the second orientation, the channel provides a tortuous pathway for the suture that is defined at least in part between the first and second locking posts such that the suture is relatively immobile relative to the locking element.

44. (Previously Presented) The vascular closure assembly according to claim 43, wherein the channel is straight.

45. (Previously Presented) The vascular closure assembly according to claim 44, wherein the channel comprises at least one curved portion.

46. (Previously Presented) The vascular closure assembly according to claim 43, wherein a greater surface area of the channel is in contact with the suture when in the second orientation than when in the first orientation.

47-48. (Canceled)

49. (Previously Presented) The vascular closure assembly according to claim 43, wherein the locking element comprises a bio-resorbable material.

50. (Previously Presented) A vascular closure assembly, comprising:

- an anchor;
- a collagen;
- a suture coupled to the anchor and extending through the collagen;
- a inner housing assembly having a housing and at least two cantilevered locking posts extending from the housing;

the inner housing assembly being rotatable between a first position and a second position, wherein

- in the first position, the suture is relatively moveable relative to the inner housing assembly in a suture space that is defined between the at least two locking posts; and
- in the second position, the suture is relatively immobile relative to the inner housing assembly.

51. (Previously Presented) The vascular closure assembly according to claim 50, wherein the inner housing assembly includes a channel through which the suture can pass.

52. (Canceled)

53. (Previously Presented) The vascular closure assembly according to claim 50, wherein expansion of the collagen provides a force that rotates the inner housing assembly.

54. (Previously Presented) The vascular closure assembly according to claim 50, wherein the inner housing assembly comprises a bio-resorbable material.

55. (Previously Presented) A vascular closure assembly, comprising:
an anchor;
a collagen;
a suture coupled to the anchor and extending through the collagen;
a locking device comprising a housing and at least two cantilevered locking posts extending from the housing, the locking device being rotatable between a first position and a second position;
in the first position, the suture can move relative to the locking device; and
in the second position, the suture is relatively immobile relative to the locking device.

56-58. (Canceled)

59. (Previously Presented) The vascular closure assembly according to claim 55, wherein the locking device comprises a bio-resorbable material.

60-62. (Canceled)